In the Claims

Please amend the claims as follows:

1. (Previously presented) An isolated and purified nucleic acid molecule encoding a vertebrate DNA repair polypeptide having SEQ ID NO:2, wherein the polypeptide has a molecular weight of about 95000 Da as determined by SDS-PAGE.

2. (Previously presented) The nucleic acid molecule of claim 1 which has SEQ ID NO:1.

3. (Canceled)

4. (Previously presented) An isolated and purified DNA molecule consisting of SEQ ID NO:1, or a DNA molecule which is fully complementary thereto.

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5-19. (Canceled)

20. (Previously presented) An isolated nucleic acid molecule comprising a promoter operably linked to a nucleic acid segment encoding SEQ ID NO:2.

21. (Previously presented) The nucleic acid molecule of claim 20 wherein the nucleic acid segment has SEQ ID NO:1.

22. (Currently amended) An expression vector comprising a promoter operably linked to a nucleic acid segment which encodes a fusion polypeptide comprising at least a portion of a DNA repair polypeptide which binds an antibody specific for SEQ ID NO:2, wherein the portion of the DNA repair polypeptide includes residues 399 to 751 of SEQ ID NO:2.

23. (Previously presented) An isolated and purified nucleic acid molecule encoding a vertebrate DNA repair polypeptide, wherein the polypeptide has a molecular weight of about 95000 Da as determined by SDS-PAGE, wherein the nucleic acid molecule has SEQ ID NO:1.

24. (Previously presented) The nucleic acid molecule of claim 1, 4, 20, 22 or 23 which is labeled.

25. (Canceled)

26. (Previously presented) The nucleic acid molecule of claim 22 wherein the fusion polypeptide is a fusion of glutathione S-transferase and at least a portion of the DNA repair polypeptide.

27. (Previously presented) The nucleic acid molecule of claim 22 wherein the fusion polypeptide is a fusion of a histidine tag and at least a portion of the DNA repair polypeptide.

28. (Previously presented) The nucleic acid molecule of claim 1 wherein SEQ ID NO:2 is immunogenic, binds DNA, forms a complex with hMre11/hRad50, or has nuclease activity when associated with hMre11/hRad50.